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ABSTRACT

This supplementary bibliography of publications produced in 1981 under the auspices of the Wisconsin Center for Education Research is intended to inform the educational community of the latest research and development on the education of individuals and diverse groups of students in elementary and secondary schools. A total of 50 technical reports, theoretical papers, working papers, books, books in preparation, Ph.D. dissertations, and master's theses are listed and annotated in the bibliography. Publications are presented in five sections: (1) books summarizing and synthesizing work in areas related to student diversity; (2) studies of student diversity in learning and development; (3) studies of skill development processes in relation to student diversity; (4) studies of interaction and organization of classroom processes in relation to student diversity; and (5) studies of student diversity and school processes. Also included are an author index, a numerical listing of papers and reports, and information on obtaining publications included in the bibliography. (ESR)

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1982 SUPPLEMENT

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January 1982

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Wisconsin Center for Education Research

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- diversity as a basic fact of human nature, through studies of learning and development
- diversity as a central challenge for educational techniques, through studies of classroom processes
- diversity as a key issue in relations between individuals and institutions, through studies of school processes
- diversity as a fundamental question in American social thought, through studies of social policy related to education

The Wisconsin Center for Education Research is a noninstructional department of the University of Wisconsin-Madison School of Education. The Center is supported primarily with funds from the National Institute of Education.

TABLE OF CONTENTS

	Page
How to Obtain Publications	vii
Books	1
Student Diversity in Learning and Development	17
Children's Comprehension of Syntactic Structure	19
Afro-American Cognitive Style	20
Metacognitive Aspects of Prose Comprehension	21
Student Diversity and Classroom Processes: Skill Development	23
Vocabulary Instruction with Culturally Diverse Children	25
Pictorial Learning Aids for the Classroom	26
Studies Related to Objective-Based Reading Instruction	31
Studies in Mathematics	32
Student Diversity and Classroom Processes: Interaction and Organization	37
Adapting Instruction to Student Differences in Aptitude and Cognitive Processes	39
Children's Communicative Competence in Instructional Contexts	40
Student Diversity and School Processes	41
Studies of the Organizational Structure, Processes and Behavior in the School as a Social System	43
Evaluation of Practices in Individualized Schooling	45
Resource Utilization in Schools and Classrooms	46
Numerical Listings	47
Technical Reports	49
Theoretical Papers	51
Working Papers	52
Author Index	55

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BOOKS

BOOKS

The Wisconsin Center for Education Research has a responsibility to ensure that the knowledge gained from its research and development activities is readily available to the education community. For this reason each major line of inquiry pursued at the Center is designed to culminate in the publication of a "milestone" document such as a book, a monograph, or conference proceedings. The following books summarize and synthesize the work of Center-associated faculty and other scholars in several areas related to student diversity. Information regarding publication dates of books in press or in preparation may be obtained from the Center Information Office.

Allen, V. L. (Ed.). Children as teachers: Theory and research on tutoring. New York: Academic Press. 1976. 290 pp. $25.50.

These well-integrated articles discuss current theory and research on peer tutoring, an increasingly important technique in the education of children. Eminent scholars from several disciplines have contributed the original chapters that make up the book. The secondary themes of cross-age interaction and helping relationships among children are prominent throughout the book. With its emphasis on the practical educational and psychological aspects of peer tutoring, Children as Teachers will be of great benefit to educational psychologists, child psychologists, social psychologists, educators, learning researchers, school psychologists, curriculum developers, and to students and workers in special education, social work, and related disciplines.

The first two sections of the book establish the basic theoretical and empirical foundations for practical programs discussed in later sections. A wide range of theoretical perspectives is offered, including historical background, role theory, ethological and cross-cultural considerations, and social skills theory. Chapters in the second section present original research on social class and ethnic differences in tutoring by young children, teaching by siblings, nonverbal skills and consequences of tutoring for the tutor, and the use of a variety of nonprofessionals as helpers. The third section evaluates a wide range of tutoring programs currently operating in the schools. Authors of these chapters draw upon available research and their extensive practical experience to present the advantages and disadvantages of tutoring programs, and to discuss the important considerations that should be taken into account when developing tutoring programs in the school. Finally, two chapters of the book summarize an extensive amount of empirical research and practical experience relevant to tutoring programs in the school.

Carpenter, T. P., Moser, J. M., & Romberg, T. A. (Eds.). Addition and subtraction: A cognitive perspective. Hillsdale, New Jersey: Lawrence Erlbaum Associates. 1982. 245 pp. $24.95.

This volume represents recent theoretical views and research findings of a group of international scholars who are concerned with the early acquisition of addition and subtraction skills by young children. The various chapters are an outgrowth of a series of papers presented at a conference held in November, 1979.

The chapters are organized into several sections: critical analyses of the structure of addition and subtraction problems, the role of counting in solution processes, development of addition and subtraction in other cultures, a technological/information processing analysis of error patterns, and developmental theories related to the acquisition of addition and subtraction skills.

While all the authors have the common aim of discussing the growth and development of the skills and understandings related to addition and subtraction, they individually bring a rich variety of perspectives to this area. The authors from Japan, Israel and the Soviet Union represent different cultural traditions as well as diverse research paradigms. The American contributors bring together the disciplines of psychology, educational psychology and mathematics education, including fields of interest such as information processing, artificial intelligence, early childhood, and classroom teaching and learning.

Dickson, W. P. (Ed.). Children's oral communication skills. New York: Academic Press. 1981. 416 pp. $29.50.

This book, which presents papers from a conference held in October 1978, integrates the research on children's communication skills deriving from two previously separate traditions: experimental research on referential communication skills and sociolinguistic research on children's communicative competence in natural settings. In addition, educational implications of the research and future directions for research and teaching of communication skills are considered.

The research brought together in this volume portrays an optimistic view of children's ability to communicate. Perhaps most exciting is the evidence emerging that children can be taught a number of speaking and listening skills. A second encouraging theme underlying the present volume is that both the referential and sociolinguistic traditions have important contributions to make to our understanding of children's communication. These two traditions

have tended to remain isolated from each other; this book is a step toward the kind of cross-disciplinary interchange necessary for a full understanding of communication skills development. The third major contribution of this volume is to offer broader theoretical perspectives on children's communication skills. It contains theoretical papers which reflect the growing importance of cognitive models of the processes underlying children's communication performance.

This book is directed toward researchers in both the referential and sociolinguistic traditions, educators concerned with the development of a curriculum for oral communication skills, and policy makers concerned with the role of communication skills in the curriculum at the local, state, and national levels.

Harvey, J. G., & Romberg, T. A. (Eds.). Problem-solving studies in mathematics. Madison: Wisconsin Research and Development Center for Individualized Schooling. 1980. 287 pp. $11.00.

This book explores the questions of how to find out what problem-solving capabilities an individual has and what other intellectual abilities are related to that capacity. The book reports nine studies originally done as doctoral dissertations, and briefly reviews 31 additional studies. The studies look at problem-solving in elementary, secondary, and college classrooms.

Only the insight approach to problem solving is considered in the book. That approach involves transforming the information given in a problem by analysis, synthesis, recombination, or other technique. The editors contrast insight with trial and error, another common problem-solving approach.

One aspect of insight emphasized in the book is the use of heuristics, higher order decision processes that help organize the search for problem solutions. Diagrams, reasoning backwards, using analogies, and looking for patterns are examples given by one of the chapter authors.

Four chapters focus on teaching the use of heuristics for problem solving and generally conclude that abilities can be improved. Other chapters discuss how to assess student problem-solving skills, including heuristics. Concluding chapters examine relationships between learner characteristics such as gender and visual spatial abilities and problem solving. The book includes an extensive bibliography.

Klausmeier, H. J., & Allen, P. S. Cognitive development of children and youth: A longitudinal study. New York: Academic Press. 1978. 336 pp. $19.50.

The authors report the major findings from the first longitudinal study of cognitive development of children and youth, encompassing grades 1-12. This groundbreaking book presents a theory of cognitive learning and development (CLD theory) on which the longitudinal study is based, and describes the application of principles of cognitive learning and development to educational practices.

Psychologists, educators, and other professionals are given access to detailed longitudinal data on four different groups of students--Grades 1-3, 4-6, 7-9, and 10-12. Students' growth throughout the school year in acquiring concepts, understanding principles, understanding structures of knowledge, and problem solving is charted. Normative development is examined along with interindividual and intraindividual differences in the rate and pattern of development.

The authors present a design for instruction which evolved through two decades of research, together with a research-based form of schooling that makes possible effective instructional programming for the individual student. The results of many short-term experiments, the longitudinal study, and the school reform effort are brought together for the first time in this volume.

Klausmeier, H. J., & Associates. Cognitive learning and development: Piagetian and information-processing perspectives. Cambridge, Mass.: Ballinger Publishing Co. 1979. 384 pp. $25.00.

This book presents the results of a 4-year study of children's conceptual development from two perspectives: Klausmeier's conceptual learning and development (CLD) theory, which focuses on development during the school years, and Piaget's more comprehensive theory of cognitive development. The book makes significant progress in clarifying the relationships between the two theories and contributes substantially to extending knowledge of the course and nature of students' cognitive development. The material is addressed to the scholarly community in educational psychology, and education. It can also be used advantageously in graduate courses in cognitive development or learning.

Klausmeier, H. J., Rossmiller, R. A., & Saily, M. (Eds.). Individually guided elementary education: Concepts and practices. New York: Academic Press. 1977. 394 pp. $19.50.

Many elementary and middle schools across the country have adopted Individually Guided Education (IGE) in the last decade. Research and evaluation studies show that the teachers' own morale and the students' educational achievements are higher, and that the students' self-concept and attitudes toward learning are improved. This complete system for adapting instruction to meet the needs of individual children is a much-needed alternative to the age-graded, self-contained elementary school classroom, the departmentalized elementary school, and the unstructured, open classroom.

With Individually Guided Elementary Education: Concepts and Practices, students, teachers, and administrators now have an authoritative and comprehensive overview of this system. It is written by 16 scholars, most of whom worked with the Wisconsin Research and Development Center for Cognitive Learning, local schools, state education agencies, and teacher-education institutions in developing and refining IGE. It is ideal both for a basic text in a credit course or noncredit staff development program dealing with IGE, and also for a second text in courses and program dealing with elementary and middle school education.

This book covers in detail the components of IGE, and also provides an overview and history of IGE. In addition, it defines objectives for starting IGE schools and establishing IGE as a focus for educational renewal, and guides readers to additional material with descriptions of a wide variety of print and audio-visual materials keyed to the chapters.

This book provides useful, how-to-do-it information for current and prospective teachers and administrators wishing to learn about IGE or adopt it for use in their schools. It will prove equally useful to the staffs of existing IGE schools in refining their practices. In addition to its value as a primary text for credit courses and noncredit staff development programs in IGE, it can serve as a second or supplementary text for courses and programs in particular aspects of individualization, such as individualized reading, mathematics, science, or social studies, and in courses on alternatives in education. Students, researchers, and teachers interested in curriculum and instruction, administration, or educational psychology at the elementary level will find the book's new perspectives and coverage invaluable for dealing with the reform and renewal of American education.

Klausmeier, H. J., & Sipple, T. S. Learning and teaching concepts: A strategy for testing applications of theory. New York: Academic Press. 1980. 228 pp. $22.50.

This book has three major themes. First, the authors report the results of 13 controlled experiments carried out over a 3-year period. These results markedly extend our knowledge about learning and teaching abstract process concepts (such as observing, inferring, predicting, and classifying) during the intermediate school years. Second, applications of Klausmeier's theory of cognitive learning and development and of his model of instructional programming for the individual student were tested and demonstrated; the book presents empirical verification of applications of both theories. The third substantive area of the book involves the research paradigm which had several noteworthy features. Each of the 13 experiments was carried out simultaneously, the cumulative effects of the experiments on both the experimental and comparison groups of students were measured, and the participating teachers carried out the experimental treatments as part of their regular instruction of the students.

An important feature of this project is developing and then empirically testing the effectiveness of instructional strategies and materials based on theory. This approach avoids the limitations of short-term experimentation that is unrelated either to theory or to instructional practice. It also eliminates the pitfalls of attempting to spell out applications of theory without conducting research on the applications. Thus, the book is of interest to practitioners as well as to researchers.

Levin, J. R., & Allen, V. L. (Eds.). Cognitive learning in children: Theories and strategies. New York: Academic Press. 1976. 314 pp. $32.00.

This book approaches children's learning in the classroom setting through a series of research projects carried out over a period of ten years by investigators at the Wisconsin Research and Development Center for Cognitive Learning. The research reported in the book stresses an orderly progression from basic to applied research in education and offers a balance of theoretical and practical information on learning and development in children. The chapters dealing with basic cognitive processes in children include discussions of research projects on concept development, memory processes, visual imagery, intellectual abilities, and metaphor. Strategies for improving classroom instruction in schools are dealt with through more applied research on prereading skills, creativity training, cross-age tutoring, and the teaching of concepts.

Lipham, J. M., & Daresh, J. C. (Eds.). Administrative and staff relationships in education: Research and practice in IGE schools. Madison: Wisconsin Research and Development Center for Individualized Schooling. 1979. 141 pp. $6.50.

This book synthesizes 20 studies, conducted between 1972 and 1978, that analyzed staff and administrative relationships in IGE schools. The book includes a brief description of IGE and its development, and major chapters on the adoption of IGE as an educational change, school organizational structure, educational leadership, and decision making. Both theoretical and practical applications of the research are discussed in detail, and areas for further research are indicated. Each study is abstracted in the appendix.

Many of the findings reported in the book have implications for educational practice. For instance, no innovation of any significance can occur in the school without the understanding and support of the principal and the active involvement of the staff. Strong linkage between teacher education institutions and local schools was also found to be an effective means for sustaining educational change. Also, principals and unit leaders must provide support, give direction, and encourage staff participation if the instructional program is to be effective. Different leadership behaviors are required during different stages of the implementation process. In addition, opportunities must be provided for the staff to participate appropriately in the decision-making process at both school-wide and instructional levels.

Massaro, D. W., Taylor, G. A., Venezky, R. L., Jastrzembski, J. E., & Lucas, P. A. Letter and word perception: Orthographic structure and visual processing in reading. New York: Elsevier-North Holland Publishing Co. 1980. 278 pp. $30.00.

This book evaluates how the reader's higher-order knowledge about orthographic structure interacts with featural information during the processing of letters and words. The research was carried out utilizing a general information processing model, which provided a formal framework from which hypotheses could be derived and tested. Since the study of visual processing in reading requires an examination of the visual features that are functional during reading, the authors describe those features used in the recognition of lowercase letters. In discussing the fundamental properties of the orthographic structure of English, they distinguish two broad categories of descriptions. The first is derived from statistical-redundance measures based on the frequency with which letter, letter sequences, and words occur in natural texts. The second category, rule-governed regularity, is based on phonological constraints of English and scribal conventions governing the spelling of English.

The psychological reality of various descriptions of orthographic structure in perceptual recognition tasks and overt judgment tasks are examined. The recognition tasks assess the degree to which knowledge of orthographic structure is utilized in word perception, and the overt judgment tasks assess the degree to which this knowledge is consiously available.

The book offers conclusions and implications for future research and classroom practice. For example, additional experiments might help researchers to choose between rule-governed regularity and statistical redundance. This research promises to lead to the description that best reflects the knowledge of orthographic structure used in the course of normal reading.

Arriving at a good description of orthographic structure should be beneficial in the development of reading instruction. Given that the utilization of orthographic structure is an important component in letter and word recognition, instructional materials should be designed to facilitate children's understanding of this structure. Current phonics programs address only the correspondences between spelling and sound, not the constraints in English orthography. Delineating the best description of orthographic structure might facilitate the teaching and learning of this structure.

Popkewitz, T. S., & Tabachnick, B. R. (Eds.). The study of schooling: Field based methodologies in educational research and evaluation. New York: Praeger Special Studies. 1981. 316 pp. $26.50

The use of field studies in educational research and evaluation presents unique dilemmas, issues, and questions for researchers to consider. Among these are the implications of findings to educational knowledge and policy-making, methodological concerns about validity and instrumentation, and ethical and political questions related to access to school contexts and to control of research data.

This book responds to issues raised by the recent interest in educational field studies. It includes essays by an international group of scholars. Rather than making a surface distinction between qualitative and quantitative research, the authors explore the scientific roots of educational inquiry as they relate to the ethical, political, and social underpinnings of research.

The book consists of three major parts. The first part, entitled "Social Theory and the Study of Schooling," includes essays that explore field studies not as a set of operations, but as a set of ideas and historical traditions. Methodology is thought of as having broad dimensions that are closely related to theories of social affairs. Various essays in this section draw upon Marxist, phenomenological, and sociology-of-knowledge perspectives to consider what are significant questions for research.

The second part is entitled "Creating Knowledge About Schooling." The essays in this section examine issues related to developing valid descriptions and to generalizing from intensive analyses of school contexts. As in the previous section, different intellectual traditions are expressed to give shape to the problem.

The third part is entitled "Practical Problems of Getting into the Field." These essays discuss political and ethical problems of preparing researchers and carrying out field studies.

In short, each article is a complete statement of a response to a problem rather than an excerpt from a longer paper. Each paper is written by active practitioners in educational research. The discussion of theory as it relates to practice is useful in beginning a course in field study methods.

Popkewitz, T. S., Tabachnick, B. R., & Wehlage, G. G. The myth of educational reporm: A study of school responses to a program of change. Madison: University of Wisconsin Press. 1982. 288 pp. $27.00.

This book is about the relation of institutional qualities of schooling and educational reform. The problem emerges out of an indepth study of six elementary schools which have adopted a particular reform program, Individually Guided Education. Within this common framework, the study identifies three distinctly different patterns of schooling. These are labeled technical, constructive, and illusory. Each of these institutional patterns contains particular conceptions of school knowledge, patterns of teacher and pupil work, and professional ideologies. Drawing upon the sociology of knowledge, these patterns of schooling are examined and the implications discussed for how educational reform is conceptualized, implemented, and evaluated.

The book is divided into three parts. Part One provides the conceptual background to the study: the problems of studying the "effects" of reform within an institutional context and the assumptions about schooling, learning, and social change that shaped the development of this effort at reform. Part Two explores the findings of the investigation. Technical, constructive, and illusory schooling are discussed considering certain constitutive characteristics of the schools studied. Part Three refocuses the discussion of the different institutional configurations in relation to the ways in which educational reform is conceptualized, implemented, and researched.

This study of Individually Guided Education, reform, and institutional life is not a conventional evaluation. The authors do not establish criteria which are explicitly used to measure some outcome, such as achievement, nor do they describe the extent to

which Individually Guided Education is successfully implemented. The intent is to make problematic the categories and procedures of Individually Guided Education by describing the implicit as well as explicit learning which occurs when students, administrators, and teachers respond to the strains of an educational reform.

Rossmiller, R. A., Geske, T. G., Frohreich, L. E., Doro, M., & Johnson, H. W. Research utilization and productivity in IGE schools. Madison: Wisconsin Research and Development Center for Individualized Schooling. 1979. 60 pp. $6.50.

This monograph summarizes the results of studies of cost, resource utilization, and productivity in elementary schools using the system of Individually Guided Education (IGE). Data for the studies were obtained from a random sample of 41 IGE schools and 15 matched pairs of IGE and non-IGE schools.

Instructional expenditures in IGE schools did not differ significantly from those in non-IGE schools. However, teachers in IGE schools spent their time differently than did their counterparts in non-IGE schools. IGE teachers devoted significantly more time to one-to-one instruction, particulary in reading and mathematics, and significantly less time to large group intruction.

A production function approach was used to identify the input and process variables that were most closely related to student achievement in reading and mathematics and to student self-concept. Several variables were found to be related consistently to student achievement in reading and mathematics. Among them were (a) teachers' involvement in a degree program, (b) years of teaching experience, (c) teachers' sex, (d) students' maturity, (e) students' social confidence, (f) teachers' perception of the principal's leadership, (g) teachers' expression of job satisfaction, and (h) teachers' involvement in decision making.

A set of 12 independent variables accounted for 78% of the variance in reading achievement and a similar set of 12 variables accounted for 71% of the variance in mathematics achievement. All of the variables included in the two composite sets were susceptible to control by teachers and administrators. One subscale of the Self-observation Scales, social confidence, served as a proxy for student self-concept. A set of 12 variables similar to those employed in the analyses of reading and mathematics achievement accounted for 72% of the variance in social confidence scores. The independent variables most closely related to social confidence tended to reflect the ambience of the school rather than specific aspects of the instructional process.

BOOKS IN PREPARATION

Otto, W., & White, S. (Eds.). Reading expository material. New York: Academic Press. In press.

This book results from a conference held November 1980 that considered recent research in the teaching of and learning from reading and the relevance of the research for classroom practice. The conference was structured around three major categories of interest, the reader, the text, and the interaction of the two.

Research in the first category focuses on the prior knowledge and knowledge structures of readers. Some investigators have paid particular attention to readers' cognitive development and to readers' prior knowledge, or schema, development in order to better understand the personal characteristics involved in effective comprehension.

Research in the second category focuses on the attributes of printed material. A number of investigators have worked with the analysis of text and the modification of text (e.g., adjunct aids) to better understand the characteristics of text and textual modifications as parameters of comprehension.

Research in the third area focuses on the interaction between readers and printed material. Investigators have examined readers' metacognitive development, the development of study skills and learning strategies, and the effects of schooling as they come to grips with the inescapable fact that reading comprehension is a product of both reader and text.

Through the conference's synthesis papers, reaction papers, and invited essays, the book brings together these research areas, integrating the reservoir of facts, implications, and directions for developing instructional procedures designed to enhance learning from text.

Wilkinson, A. C. (Ed.). Classroom computers and cognitive science. In production.

This book resulted from a November 1981 conference which brought together experts to evaluate current and potential uses of computers as instructional tools in formal classroom settings and in formal education. The conference theme was instructional software for promoting children's mastery of lexical skills and semantic knowledge.

Major sections in the book include: Writing and Communicating, Cognitive Skills in Reading, Reasoning with Semantic Knowledge, and Will It Work? Practical Issues of Teaching with Computers. Contributors include Marianne Amarel from Educational Testing Service, Richard Venezky from the University of Delaware, Joyce Haakansson from the Children's Television Workshop, Lawrence Frase from Bell Labs, and Robert Sternberg, Janet Powell, and Daniel Kaye from Yale.

Wilkinson, L. C. (Ed.). Communicating in the classroom. New York: Academic Press. In press.

The impetus for this volume was a conference held October 1980 to integrate and evaluate the major theories, methods, and issues associated with research in communicating in the classroom and to explore educational implications of this work.

Several topics are addressed, including the following:

1. Communicative competence, which involves both the formal and functional aspects of language development and learning the rules that relate language use to social situations. Basic knowledge about school-age children's pragmatic development is reviewed as well as individual differences in the communicative competence of school-age children.

2. The classroom as an educational and instructional context. Classroom activities require communication both as a means toward achieving educational objectives and as an end in itself, that is, the learning of formal and functional language rules. Studies of the classroom as a context are discussed, and a variety of descriptive techniques, such as ethnography, are considered.

3. Theories and approaches that researchers have used to study communicating in the classroom. Researchers from a variety of disciplines have focused upon discourse in the classroom.

4. Methods to investigate communicating in the classroom. Several types of observational and experimental approaches are discussed. Research consists of both qualitative and quantitative analysis. Representation of the underlying assumptions and methods of analysis is included.

5. Individual and group variation in communicating in the classroom, including individual differences, bilingualism, and dialect differences.

Yussen, S. R. (Ed.). The development of reflection. New York: Academic Press. In Press.

This book results from a conference held in October 1979 to explore recent developments in two interrelated fields of inquiry, metacognitive development and interpersonal attribution. Metacognition is concerned with the knowledge or beliefs held by individuals about the nature of some cognitive activity, e.g., remembering or comprehending. Interpersonal attribution concerns the beliefs held by individuals about what other people are like and what causes others to act the way they do.

The process of acquiring insights into one's own cognition is a logical part of acquiring understanding into the nature of what people are like in general. Thus, metacognitive awareness and interpersonal attribution appear to be closely linked.

The book consists of 10 chapters by the conference participants and brief introductory and concluding chapters by the editor. It defines the state of our knowledge about metacognitive growth and interpersonal attribution, speculates on the "link" between these two domains, and suggests consequences from this research for the practice of education. The book is expected to appeal to scholars in psychology, human development, and social psychology.

STUDENT DIVERSITY IN LEARNING AND DEVELOPMENT

Peter A. Schreiber
Coordinator

CHILDREN'S COMPREHENSION OF SYNTACTIC STRUCTURE

Faculty Associates:

W. Charles Read, Departments of English and Linguistics

Peter A. Schreiber, Departments of English and Linguistics

Schreiber, P. A., & Read, W. C. Interpreting Wh-questions in English, German, and Dutch. Working Paper No. 309. 48 pp. July 1981.

This investigation concerns the relative speed with which listeners comprehend (and answer) subject and object questions in English, German, and Dutch. The primary data are the times required to answer pairs of questions like

Who is chasing the boy?
Who is the boy chasing?

and their counterparts in Dutch and German. In the three languages, the corresponding questions express the same semantic content, but in three different syntactic forms. The subject/object functions are signalled by word order in English, morphology in German, and only by context in Dutch. Noting which of the two forms is responded to more rapidly in each language gives insight into the roles that these three kinds of cues play in the comprehension process.

Subject questions are answered faster in Dutch and German, object questions are answered faster in English. This outcome favors the view that comprehension is a highly interactive process which draws upon multiple kinds of cues, but we also note an ambiguity in the English results, and consequently a need for further investigation.

AFRO-AMERICAN COGNITIVE STYLE

Faculty Associate:

Barbara J. Shade, Department of Afro-American Studies

Shade, B. J. Afro-American cognitive style: A variable in school success? Theoretical Paper No. 94. 60 pp. October 1981.

During the 1970s increased study was directed to factors which contribute to individual differences in academic performance, particularly sex roles, social class, developmental changes, and race. "Race," until recently was defined by color, but current thinking redefines the concept as ethnicity with a culturally induced lifestyle and perspective. Proponents of this approach suggest that diversity in task and academic competence is precipitated by differences in culturally induced psychological, cognitive, and behavioral strategies rather than ability differences. This theoretical review examines this idea in terms of Afro-Americans.

METACOGNITIVE ASPECTS OF PROSE COMPREHENSION

Faculty Associate:

Steven R. Yussen, Department of Educational Psychology

Buss, R. R., Yussen, S. R., Mathews, S. R. II, Miller, G. E., & Rembold, K. L. Development of children's use of a story schema to retrieve information. Working Paper No. 308. 29 pp. April 1981.

Two experiments examined the individual's ability to retrieve information from simple stories. In Experiment 1, second-grade, sixth-grade, and college subjects heard normal or scrambled stories and either recalled them exactly as heard or recalled them as good stories. Scrambled stories generally depressed recall and there was a clear improvement with age/grade in the ability to reorganize a scrambled story, with second graders performing especially poorly. In Experiment 2, we examined two alternatives for second graders' poor performance. First, it may be that younger children's memory for material they have just heard is "fragile" and any attempt to operate on it or transform it is doomed because the effort involved detracts from the effort to hold on to the memory itself. A second alternative is that the sequencing techniques needed to reorder a scrambled story are not well mastered in young children. Results confirmed that second graders can reorganize their recall only if some training in sequencing is offered.

Mathews, S. R. II. Age related effects of the interaction of prior knowledge and text structure on the recall of prose. Technical Report No. 569. (Ph.D. dissertation) 113 pp. April 1981. ED 201 977.

The structure of a text and prior knowledge about its contents have both been shown to impact on comprehension. The present study assessed the effects of those variables on comprehension and recall of text by fourth- and eighth-grade subjects. It was hypothesized that prior knowledge would have more of an impact on the fourth graders' performance than on that of the eighth graders. That impact would be manifested in recall of prior-knowledge-related information regardless of its location in the text structure. To assess this effect, each grade was divided into three groups: a prior knowledge group, an unrelated knowledge group, and a no knowledge control group.

A prediction of differential recall by the prior knowledge group and the unrelated group was supported at the fourth grade. This is consistent with a text structure hypothesis. At the eighth grade, no consistent differences in performance among the groups were detected.

The accessibility (free recall) and availability (probe questions) of information by the fourth graders are both affected by prior knowledge. These effects are not present with the eighth graders, and this difference is consistent with the suggestion that children become more text bound in their comprehension as they move through the school years.

Stevens, B. Children's awareness of story order. Technical Report No. 577. (Master's Thesis) 68 pp. June 1981.

The purpose of this study was to determine the role of story grammars in children's ability to detect misplaced information in simple narratives. The results indicated that children judged correctly ordered stories to be "well-formed" and "sensible," but frequently identified disordered stories to be "flawed." Developmental differences were found in children's abilities to utilize expectations for the sequence of a story in determining when the story made sense and in correctly reordering the story.

STUDENT DIVERSITY AND CLASSROOM PROCESSES:

SKILL DEVELOPMENT

Joel R. Levin
Coordinator

VOCABULARY INSTRUCTION WITH CULTURALLY DIVERSE CHILDREN

Faculty Associate:

Dale D. Johnson, Department of Curriculum and Instruction

Johnson, D. D., Toms-Bronowski, S., & Pittelman, S. D. A review of the trends in vocabulary research and the effects of prior knowledge on instructional strategies for vocabulary acquisition. Theoretical Paper No. 95. 60 pp. November 1981.

This paper presents an historical overview of trends in vocabulary research, emphasizing the importance of word knowledge as a critical component in reading comprehension. Research examining current psychological and pedagogical models as they relate to vocabulary knowledge is described. Vocabulary research in the area of specific teaching strategies is explored as it has grown out of former vocabulary research findings; several teaching strategies that reflect an information-processing orientation are presented. Semantic mapping and semantic feature analysis procedures are described and exemplified, as are other more conventional vocabulary instructional strategies.

PICTORIAL LEARNING AIDS FOR THE CLASSROOM

Faculty Associate:

Joel R. Levin, Department of Educational Psychology

Levin, J. R. Pictures as prose-learning devices. Theoretical Paper No. 93. 67 pp. October 1981.

Popular strategies for improving prose processing consist of procedures that force attention either to the text's macro-structure or to the organization and interconnections of the text's propositions. These strategies are assumed to enhance students' comprehension of the text as encoded, as well as to afford students with an efficient storage and retrieval scheme for long-term recall of text information. However, with expository or instructional texts containing factual information that is unfamiliar, complex, abstract, or simply difficult to remember, comprehension strategies of the kind just described may not be optimally suited for enhancing long-term recall. Rather, mnemonic strategies that are designed expressly for storage and retrieval of difficult-to-remember information would seem to be preferable. Several recent experiments are reported to provide preliminary support for this view. It is proposed that prose-learning strategies that combine the critical components of comprehension-directed techniques with those of memory-directed techniques will ultimately prove to be the most successful.

Levin, J. R., & Pressley, M. Understanding mnemonic imagery effects: A dozen "obvious" outcomes. Theoretical Paper No. 91. 28 pp. January 1981.

Using a recently devised imagery mnemonic as a vehicle, the authors argue that even the most well-reasoned and explainable psychological outcomes need to be validated empirically. Twelve examples are provided in which an eminently reasonable cognitive outcome was anticipated and yet, under experimental scrutiny, some other equally reasonable cognitive outcome materialized. Empirical validation behavior should be a foremost concern among those who offer prescriptions for the improvement of educational products and processes.

Levin, J. R., Kessler, J., Miller, G. E., & Bartell, N. P. More on how (and how not) to remember the states and their capitals. Working Paper No. 306. 30 pp. March 1981.

An empirically developed set of mnemonic materials for learning the states and their capitals was compared with a set of commercially available materials in two experiments with elementary school children. The empirically developed materials, which were considerably less complex than the commercially available ones, also proved to be more effective in both experiments. Students receiving the commercially available materials learned no better than students left to their own devices. Concrete suggestions are offered concerning how to maximize children's chances for success with mnemonic curriculum materials.

Levin, J. R., McCormick, C. B., & Dretzke, B. J. Investigation of a combined mnemonic strategy for teaching the order of U.S. presidents. Working Paper No. 307. 23 pp. March 1981.

Eighth-grade students were taught the names and numbers of a set of U.S. presidents according to a specially devised strategy. The strategy represented a combination of three pictorial mnemonic techniques: the method of loci, the pegword method, and the keyword method. Students taught according to the combined mnemonic strategy outperformed time-equivalent controls, whether provided with a well-ordered set of presidents during input (i.e., presidents presented in their proper serial order) or a more complicated set (i.e., presidents presented in alphabetical order). Additional mnemonic possibilities for research and practice are discussed.

Levin, J. R., McCormick, C. B., Miller, G. E., Kessler, J., & Pressley, M. Mnemonic versus nonmnemonic vocabulary-learning strategies for children. Working Paper No. 305. 34 pp. February 1981.

Fourth-grade students learned a list of relatively complex English vocabulary words in two experiments. In Experiment 1, pupils used either a mnemonic ("keyword") contextual or a verbal contextual procedure. In Experiment 2, three other conditions were compared to the keyword context condition. They included a non-strategy control condition and two other contextual variations: (a) an experiential context condition that had been used previously; and (b) a nonkeyword pictorial context condition. In both experiments, the keyword method proved effective for enhancing children's acquisition of new vocabulary words. Moreover, in the second experiment, neither of the two nonkeyword contextual variations improved students' performance.

Levin, J. R., Shriberg, L. K., & Berry, J. K. A concrete strategy for remembering abstract prose. Working Paper No. 314. 33 pp. December 1981.

In four experiments, eighth-grade students were presented short prose passages that described the distinguishing attributes of fictitious towns. Illustrations were devised to represent the designated attributes, either separately, thematically, or thematically in conjunction with the mnemonic keyword method. Keyword illustrations proved to be highly effective facilitators of students' memory for and organization of the critical passage information. This was true with respect to both students' ability to match the towns and their attributes and their ability to recall either the corresponding verbatim or essential attribute information. Implications of the findings and suggestions for future research are included.

McCormick, C. B. The effect of mnemonic strategy variations on students' recall of potentially confusable prose passages. Technical Report No. 582. (Ph.D. dissertation) 158 pp. September 1981.

Two hundred and twenty eighth-grade students were presented biographies of fictitious people, which were constructed to be potentially confusable. Some students were instructed to use a prose-learning adaptation of the mnemonic keyword method to aid them in remembering the information in the passages. Each keyword student was provided instruction in one of three variations of the keyword method, differing in terms of the organization of mnemonic images produced by the imagery instructions. Control students were instructed to use their own best method to help them remember the information. All three variations of the keyword instruction resulted in significantly higher levels of recall (as measured by a short-answer test) compared to the control students. This result occurred for two different test question orders, random and ordered. Furthermore, keyword students could also be distinguished from the controls, as well as from one another, on the basis of qualitative differences in their recall patterns.

Pressley, M., Levin, J. R., & Delaney, H. D. The mnemonic keyword method. Theoretical Paper No. 92. 68 pp. February 1981.

The keyword method is a two-stage procedure for remembering materials that have an associative component. In the case of foreign vocabulary learning, for example, the learner must first acquire a stable association between the unfamiliar foreign word and a familiar English word that sounds like a salient part of the foreign word. The acoustically similar English word is the "keyword." The

learner then encodes a meaningful interaction between the keyword and the foreign word's definition. The method has been investigated most extensively with respect to recall of definitions from vocabulary words. However, other aspects of vocabulary learning are also considered here, as are potential classroom applications of the keyword method based on a variety of curricular content. Future research directions are emphasized throughout the discussion.

Pressley, M., Levin, J. R., Kuiper, N. A., Bryant, S. L., & Michener, S. Mnemonic versus nonmnemonic vocabulary-learning strategies: Putting "depth" to rest. Working Paper No. 312. 44 pp. August 1981.

The keyword method of vocabulary learning was compared with five methods designed to increase semantic processing of the definitions of the vocabulary words. In Exps. 1-3, recall of the definitions from the vocabulary words was the critical dependent measure, with the keyword method producing greater learning than in any of the semantic-based or control conditions. Also, none of the semantic-based conditions facilitated definition recall, relative to a no-strategy control condition. In Exps. 4 and 5, the keyword method, two semantic strategies, and the no-strategy control procedure were compared with respect to associative- and response-learning components of vocabulary learning. The keyword method enhanced vocabulary/definition (associative) learning, but not definition (response) learning per se. In contrast, the semantic conditions tended to increase nonassociative learning of the definitions. These results bolster the case that the keyword method is a vocabulary-learning procedure superior to semantic-based strategies of the kind advocated by reading theorists.

Truman, D. L. The effects of pictorial aids on inferentially-produced interference in younger and older children's sentence learning. Technical Report No. 573. (Ph.D. dissertation) 160 pp. March 1981. ED 201 976.

The object of this study was to explore the effects of pictures on inferentially-produced interference in recognition memory for sentence information in two age groups, seven-year-olds and eleven-year-olds. There were 104 subjects at each age level.

The design consisted of two levels each of age (younger or older), strategy (no-strategy control or provided pictures), contextual relatedness of distractors and test question (related or unrelated), and item type (explicit or implicit). It was predicted that older children would spontaneously infer and thus would have similar levels of interference from implicit information and explicit

information, under a control condition. Younger children were predicted not to infer spontaneously, and therefore their level of interference would be higher on explicit items compared with implicit items.

Pictures displayed all sentence information except what would later become a multiple-choice distractor. The pictures were predicted to aid learning of target information for both younger and older subjects compared to control subjects. It was also predicted that when pictures were provided, there would be no difference in interference levels between explicit and implicit items at either age level.

The major finding was that learning with pictures was significantly better than learning without pictures. The results of comparisons of overall levels of interference indicated no differences due to item type (explicit or implicit) at either age level. There was no primary evidence of interference within each item type. Possible sources producing no contextual interference in the control condition may have involved the use of various covert strategies.

STUDIES RELATED TO OBJECTIVE-BASED READING INSTRUCTION

Faculty Associate:

Wayne R. Otto, Department of Curriculum and Instruction

Eldridge, R. G., Jr. An ethnographic study of the acquisition and application of reading skills in one elementary school classroom. Technical Report No. 579. (Ph.D. dissertation) 308 pp. August 1981.

This was an ethnographic study intended to describe and examine the cultural knowledge, beliefs, ideas, and actions of one teacher and 26 fourth- and fifth-graders in one classroom regarding the acquisition of reading comprehension skills during reading instruction and the application of those reading skills during social studies instruction.

The information that was obtained offers general direction and specific concepts to guide future "full classroom" studies from both qualitative and quantitative perspectives. Such studies should help (a) to clarify further the classroom inhabitants' cultural knowledge, beliefs, ideas, and actions related to reading and reading instruction, and thereby (b) to develop further sound groundwork for seeking and for developing more effective practices in classrooms and schools.

Otto, W. R., White, S. R., Richgels, D., Hansen, R., & Morrison, B. S. A technique for improving the understanding of expository text: Gloss. Theoretical Paper No. 96. 119 pp. November 1981.

Gloss is a technique that involves the use of marginal notes and other intratext notations to direct readers' attention while they read. Instead of relying on traditional adjunct aids like questions and advance organizers, gloss attempts to direct the reader's active attention to places in the text where the application of specific skills and strategies would aid comprehension. Gloss notations focus on both the process (skills and strategies) of reading content area texts and the content (facts and concepts) of texts. Guidelines for writing gloss are given along with examples of gloss notations for a variety of texts.

STUDIES IN MATHEMATICS

Faculty Associates:

Thomas A. Romberg, Department of Curriculum and Instruction

Thomas P. Carpenter, Department of Curriculum and Instruction

Anick, C. M., Buchanan, A. E., Carpenter, T. P., Moser, J. M., & Steinberg, R. M. Results from first and second individual interviews (February and May 1980) of the second phase of the longitudinal study. Working Paper No. 310. 98 pp. July 1981.

This report presents data from the first and second individual interviews of the second phase of a three-year study on addition and subtraction verbal problem solving. The second phase of the study is concerned with children's performance on verbal addition and subtraction problems which contain two-digit numbers, half of which require regrouping for correct computational solution. Ninety-six second-grade children were individually administered 12 verbal problems that could be solved using addition or subtraction. Responses were coded in terms of appropriateness of strategy, correct or incorrect answer, type of error, mode of representation, and solution strategy. Group data on the problems as well as information on individual subjects are reported in this paper.

Anick, C. M., Buchanan, A. E., Carpenter, T. P., Moser, J. M., & Steinberg, R. M. Results from third and fourth individual interviews (September 1980 and January 1981) of the second phase of the longitudinal study. Working Paper No. 311. 97 pp. July 1981.

This report presents data from the third and fourth individual interviews of the second phase of a three-year study on addition and subtraction verbal problem solving. The second phase of the study is concerned with children's performance on verbal addition and subtraction problems which contain two-digit numbers, half of which require regrouping for correct computational solution. Ninety-six second-grade children were individually administered 12 verbal problems that could be solved using addition or subtraction. Responses were coded in terms of appropriateness of strategy, correct or incorrect answer, type of error, mode of representation, and solution strategy. Group data on the problems as well as information on individual subjects are reported in this paper.

Anick, C. M., Buchanan, A. E., Carpenter, T. P., Moser, J. M., & Steinberg, R. Results from eighth individual interview (January 1981), coordinated study #1. Working Paper No. 313. 107 pp. August 1981.

This report presents data from the eighth individual interview of the subjects participating in a three-year study on addition and subtraction verbal problem solving. Ninety-two third grade children were individually administered 18 verbal problems that could be solved using addition or subtraction. Responses were coded in terms of appropriateness of strategy, correct or incorrect answer, type of error, mode of representation, and solution strategy. For every problem, over 90% of the subjects chose a correct strategy. Group data on the problems as well as information on individual subjects are reported in this paper.

Blum, G. W. Kindergarten and first-grade children's strategies for solving addition and subtraction problems in abstract and verbal problem contexts. Technical Report No. 583. (Ph.D. dissertation) 293 pp. November 1981.

The purpose of this study was to describe and compare children's performance on addition and subtraction problems presented in verbal (word) problem and abstract contexts. Fifty kindergartners and 54 first graders were individually interviewed in mid-year to observe their solution strategies and errors on 12 abstract and 12 verbal addition and subtraction problems.

All problems were based on the open sentences a+b=__, a-b=__, and a+__=c. The verbal problems included action (join) and static (combine) addition, and action (separate and join/change unknown) subtraction problems. Abstract problems paralleled the verbal problems and were presented in written number sentence mode to first-graders and oral mode (e.g., "Two and three are how many?") to kindergartners. All kindergarten subjects and half of the first-grade subjects had manipulatives available throughout the interviews.

Subjects used strategies involving concrete representation (with manipulatives or fingers) less with abstract than verbal problems and guessing occurred more frequently on the abstract problems. At both grade levels and for problems in both contexts, the subjects' strategies mirrored the structure of the problems. The errors exhibited at the two grade levels were similar, but first-grade subjects experienced fewer difficulties in modeling the relationship or action in the problems.

Subjects in each grade were clustered according to the solution strategies they employed and according to the types of problems they could solve. The clusterings indicated that subjects who

were homogeneous in terms of the types of problems they could solve were heterogeneous in terms of the solution strategies they employed.

The study indicates that abstract and verbal addition and subtraction problems are of equal difficulty for children at the kindergarten and first-grade levels. This suggests that verbal problems are a potential vehicle for initial instruction on the operations of addition and subtraction.

Carpenter, T. P., Moser, J. M., & Hiebert, J. The effect of instruction on first-grade children's solutions of basic addition and subtraction problems. Working Paper No. 304. 37 pp. January 1981.

This study investigated the effect of initial instruction on the processes children use to solve basic addition and subtraction verbal problems and problems presented using concrete objects. Prior to instruction and following a two-month introductory unit on addition and subtraction, 43 first-grade children were individually tested on concrete and verbal problems representing different models of addition and subtraction. Prior to instruction, children's solution processes for the verbal problems modeled the action or relationships described in the problem. Following instruction, they generally used a separating strategy for all subtraction problems. Although they could solve the problems, few children could coordinate their solutions with the arithmetic sentence they wrote representing the problem.

Romberg, T. A., Collis, K. F., & Buchanan, A. E. Performance on addition and subtraction problems: Results from individual interviews--Sandy Bay study. Technical Report No. 580. 214 pp. November 1981.

This paper reports the results of the third in a series of collaborative studies examining how young children acquire the skills to represent and solve verbal addition and subtraction problems. The purpose of this study was to relate children's cognitive processing capabilities and their grade level to their performance and to the strategies they used when working addition and subtraction problems.

From two sets of data which assessed memory capacity and cognitive processing capacities, we identified six groups of children with different specific cognitive characteristics. For a sample of 44, children in five classes at Grades 1, 2, and 3 were selected and interviewed as they worked a set of addition and subtraction

problems. Each child was interviewed on three occasions. Each interview consisted of six tasks given under four of six conditions.

For both percent correct and strategy used, there were important variations due to problem set (size of number), to specific task, to instruction over time, and to grade. However, what is clear is that children who differ in cognitive processing capacity consistently performed differently regardless of the other important factors.

STUDENT DIVERSITY AND CLASSROOM PROCESSES:

INTERACTION AND ORGANIZATION

Penelope L. Peterson
Coordinator

ADAPTING INSTRUCTION TO STUDENT DIFFERENCES IN APTITUDE AND COGNITIVE PROCESSES

Faculty Associate:

Penelope L. Peterson, Department of Educational Psychology

Peterson, P. L., Swing, S. R., Braverman, M. T., & Buss, R. Students' aptitudes and their reports of cognitive processes during direct instruction. Technical Report No. 581. 43 pp. August 1981.

Fifth- and sixth-grade students (n = 72) were randomly assigned to one of six classes using a factorial assignment of ability level crossed with attitude. Each class of 12 students was taught a two-day unit on probability. The teaching followed the direct instruction model. Students were videotaped during the lesson. After the lesson, students were interviewed about their thought processes using a "stimulated-recall" procedure. Results showed that, independent of student ability, students' reports of their understanding of the lesson were significantly related to achievement. Moreover, students who reported using specific cognitive strategies, such as relating the information being taught to prior knowledge, did better on the achievement test than students who did not report using such strategies.

Swing, S. R., & Peterson, P. L. The relationship of student ability and small-group interaction to student achievement. Technical Report No. 575. 38 pp. June 1981.

This study examined student ability and student behaviors during small-group interaction as hypothesized mediators of the effectiveness of small-group learning. Fifth-grade students (n = 43) completed ability and attitude pretests. A treatment group was trained in small-group interaction. Students received regular classroom instruction in mathematics for 4 weeks. Each day students worked on assignments in mixed ability groups of four students. Achievement, retention, and attitude toward mathematics were assessed. A Mann-Whitney comparison showed that trained students participated in more task-related interaction than control students. Results suggested that task-related interaction in the small group enhanced the achievement and retention of high and low ability students but did not facilitate the achievement of medium ability students.

CHILDREN'S COMMUNICATIVE COMPETENCE IN INSTRUCTIONAL CONTEXTS

Faculty Associate:

Louise Cherry Wilkinson, Department of Educational Psychology

Wilkinson, L. C., & Spinelli, F. Peers' requests and responses in third-grade reading groups. Technical Report No. 584. 35 pp. November 1981.

This study investigates 35 third-grade students' requests and responses in their reading groups. Standardized reading achievement tests and tests of language knowledge were administered, and six samples of peer interaction were video-taped in seven homogeneous reading groups in the fall and spring of one academic year. The results showed that (a) the ability groups differed in reading achievement, and these differences remained stable throughout the year; (b) the groups differed in their requests and responses, and these differences also remained stable; (c) aspects of requests predicted obtaining appropriate responses, which confirmed a model of the effective speaker. Implications for opportunities to develop skills in peer instructional groups are discussed.

STUDENT DIVERSITY AND SCHOOL PROCESSES

Richard A. Rossmiller
Coordinator

STUDIES OF THE ORGANIZATIONAL STRUCTURE, PROCESSES, AND BEHAVIOR IN THE SCHOOL AS A SOCIAL SYSTEM

Faculty Associate:

James M. Lipham, Department of Educational Administration

Dunstan, J. F. An ethnographic study of the decision-making processes and leadership behavior at the schoolwide level in selected secondary schools. Technical Report No. 572. (Ph.D. dissertation) 356 pp. February 1981. ED 206 091.

The major purpose of this study was to analyze the decision-making processes and leadership behavior at the schoolwide level in selected secondary schools that were implementing programs compatible with the objectives of the Wisconsin Program for the Renewal and Improvement of Secondary Education. The data were gathered by means of field study methodology, including interviews, participant observation, and document analysis.

Decision making in the schools was analyzed in terms of decision content, stages, involvement, and constraints. Structural, participative, and supporting leadership behaviors were also identified, described, and analyzed.

Lipham, J. M., Dunstan, J. F., & Rankin, R. E. The relationship of decision involvement and principals' leadership to teacher job satisfaction in selected secondary schools. Technical Report No. 571. 147 pp. February 1981. ED 207 129.

This was a study of the relationships between extent of staff participation in educational decision making and staff perceptions of the principal's leadership and staff job satisfaction in four secondary schools. The major findings were:

1. Regarding involvement in decision making, school staffs were generally in a state of decision deprivation. They felt more deprived of making managerial or schoolwide decisions than they did in making technical or classroom type decisions.

2. Regarding staff perceptions of the principals' leadership, they rated principals highest in support behavior and lowest in work facilitation.

3. Regarding staff job satisfaction, they were most satisfied with relations with pupils, co-workers, and the administration and least satisfied with financial aspects and community relations.

4. Staff involvement in decision making was significantly and positively related to staff job satisfaction.

5. Staff perceptions of the leadership behavior of the principal were significantly and positively related to staff job satisfaction.

6. The combination of staff perceptions of the principals' leadership and specific school was the best predictor of staff job satisfaction.

Rankin, R. E. A qualitative study of the decision-making processes and leadership behavior at the teaching-advising level in selected secondary schools. Technical Report No. 576. (Ph.D. dissertation) 259 pp. May 1981. ED 206 092.

The major purpose of this study was to observe, describe, and explain the decision-making processes and associated leadership behavior at the teaching-advising level in selected secondary schools that were implementing programs compatible with the objectives of the Wisconsin Program for the Renewal and Improvement of Secondary Education. The data were gathered by means of qualitative methodology, including interviews, observations, and document analysis.

Decision making in the schools was analyzed in terms of decision content, involvement, and processes. Leadership behavior of schoolwide personnel and of a unit or department were also identified, described, and analyzed.

EVALUATION OF PRACTICES IN INDIVIDUALIZED SCHOOLING

Faculty Associates:

Gary G. Price, Department of Curriculum and Instruction

Thomas A. Romberg, Department of Curriculum and Instruction

Price, G. G., Romberg, T. A., & Janicki, T. C. IGE evaluation phase I summary report. Technical Report No. 578. 100 pp. November 1981.

Phase I of the evaluation of IGE was a large-sample survey of 156 schools. Two Instruction and Research (I & R) units per school were studied--one that included grade 2 children and one that included grade 5 children. The following were all hypothesized to be positively correlated with measures of student achievement in reading and mathematics: measures of the organization of classroom instruction, a measure of the use of varied curriculum materials designed to be compatible with the Instructional Programming Model (IPM), a measure of the extent of schoolwide implementation of the IPM, and measures of assorted schoolwide organizational features distinctive to IGE. There were also hypothesized links among some of these measures. Although some of the hypothesized links among IGE-related measures were empirically supported, none of the hypothesized links with student achievement were supported by the data. Some of these negative findings can plausibly be attributed to measurement error and specification error inherent to the survey methods; others cannot. Some organizational features distinctive to IGE were found to be positively correlated with teachers' job satisfaction.

RESOURCE UTILIZATION IN SCHOOLS AND CLASSROOMS

Faculty Associates:

Richard A. Rossmiller, Department of Educational Administration

Lloyd E. Frohreich, Department of Educational Administration

Hassenpflug, A. M. The use and understanding of school time by third graders: An ethnographic case study. Technical Report No. 574. (Ph.D. dissertation) 360 pp. May 1981. ED 203 997.

The major purposes of this study were to determine how individual third graders use and understand school time, to ascertain what relationships exist between their use and perception of school time, and to generate conclusions about third graders' use and understanding of school time that would be relevant for educational administrators and teachers in allocating school time as an educational resource.

Data for the study were gathered from observations, interviews, and school records of 43 third graders in two ability-grouped units at one school. Noninstructional time accounted for nearly one-third of the total time available in the school week. Most primary unit (lower ability) third graders received fewer scheduled minutes of reading and mathematics per week than did those in the intermediate unit (higher ability). Despite substantial variations in the time actually allotted a subject each day, most students received at least 80 percent of the scheduled instructional time in each subject. Approximately three-fourths of the time in class was devoted to instructional activities and one-fourth to noninstructional activities. The mean percentage of off-task time for third graders was relatively low and was greater in academic subjects that in special subjects (art, music, etc.). Neither the length of academic classes, total achievement test scores, nor IQ scores showed much correlation with the percentage of student time off-task in subject areas.

NUMERICAL LISTING

TECHNICAL REPORTS

No. 569 Mathews, S. R. II. Age related effects of the interaction of prior knowledge and text structure on the recall of prose. Technical Report No. 569. (Ph.D. dissertation) 113 pp. April 1981. ED 201 977.

No. 570 Harris, R. J. Relationship of counseling factors to minority females' participation in mathematics and science. Technical Report No. 570. (Ph.D. dissertation) 177 pp. November 1980. ED 201 935. (See Bibliography of Publications 1981 Supplement for abstract of this publication.)

No. 571 Lipham, J. M., Dunstan, J. F., & Rankin, R. E. The relationship of decision involvement and principals' leadership to teacher job satisfaction in selected secondary schools. Technical Report No. 571. 147 pp. February 1981. ED 207 129.

No. 572 Dunstan, J. F. An ethnographic study of the decision-making processes and leadership behavior at the schoolwide level in selected secondary schools. Technical Report No. 572. (Ph.D. dissertation) 356 pp. February 1981. ED 206 091.

No. 573 Truman, D. L. The effects of pictorial aids on inferentially-produced interference in younger and older children's sentence learning. Technical Report No. 573. (Ph.D. dissertation) 160 pp. March 1981. ED 201 976.

No. 574 Hassenpflug, A. M. The use and understanding of school time by third graders: An ethnographic case study. Technical Report No. 574. (Ph.D. dissertation) 360 pp. May 1981. ED 203 997.

No. 575 Swing, S. R., & Peterson, P. L. The relationship of student ability and small-group interaction to student achievement. Technical Report No. 575. 38 pp. June 1981.

No. 576 Rankin, R. E. A qualitative study of the decision-making processes and leadership behavior at the teaching-advising level in selected secondary schools. Technical Report No. 576. (Ph.D. dissertation) 259 pp. May 1981. ED 206 092.

No. 577 Stevens, B. Children's awareness of story order. Technical Report No. 577. (Master's Thesis) 68 pp. June 1981.

TECHNICAL REPORTS

No. 578 Price, G. G., Romberg, T. A., & Janicki, T. C. IGE evaluation phase I summary report. Technical Report No. 578. 100 pp. November 1981.

No. 579 Eldridge, R. G., Jr. An ethnographic study of the acquisition and application of reading skills in one elementary school classroom. Technical Report No. 579. (Ph.D. dissertation) 308 pp. August 1981.

No. 580 Romberg, T. A., Collis, K. F., & Buchanan, A. E. Performance on addition and subtraction problems: Results from individual interviews--Sandy Bay study. Technical Report No. 580. 214 pp. November 1981.

No. 581 Peterson, P. L., Swing, S. F., Braverman, M. T., & Buss, R. Students' aptitudes and their reports of cognitive processes during direct instruction. Technical Report No. 581. 43 pp. August 1981.

No. 582 McCormick, C. B. The effect of mnemonic strategy variations on students' recall of potentially confusable prose passages. Technical Report No. 582. (Ph.D. dissertation) 158 pp. September 1981.

No. 583 Blum, G. W. Kindergarten and first-grade children's strategies for solving addition and subtraction problems in abstract and verbal problem contexts. Technical Report No. 583. (Ph.D. dissertation) 293 pp. November 1981.

No. 584 Wilkinson, L. C., & Spinelli, F. Peers' requests and responses in third-grade reading groups. Technical Report No. 584. 35 pp. November 1981.

THEORETICAL PAPERS

No. 91 Levin, J. R., & Pressley, M. Understanding mnemonic imagery effects: A dozen "obvious" outcomes. Theoretical Paper No. 91. 28 pp. January 1981.

No. 92 Pressley, M., Levin, J. R., & Delaney, H. D. The mnemonic keyword method. Theoretical Paper No. 92. 68 pp. February 1981.

No. 93 Levin, J. R. Pictures as prose-learning devices. Theoretical Paper No. 93. 67 pp. October 1981.

No. 94 Shade, B. J. Afro-American cognitive style: A variable in school success? Theoretical Paper No. 94. 60 pp. October 1981.

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AUTHOR INDEX

TR = Technical Report
TP = Theoretical Paper
WP = Working Paper

AUTHOR INDEX

Allen, P. S.	Book (6)
Allen, V. L.	Book (3); Book (8)
Anick, C. M.	WP 310 (32); WP 311 (32); WP 313 (33)
Bartell, N. P.	WP 306 (27)
Berry, J. K.	WP 314 (28)
Blum, G. W.	TR 583 (33)
Braverman, M. T.	TR 581 (39)
Bryant, S. L.	WP 312 (29)
Buchanan, A. E.	WP 310 (32); WP 311 (32); WP 313 (32); TR 580 (34)
Buss, R. R.	WP 308 (21); TR 581 (39)
Carpenter, T. P.	Book (4); WP 310 (32); WP 311 (32); WP 313 (33); WP 304 (34)
Collis, K. F.	TR 580 (34)
Daresh, J. C.	Book (9)
Delaney, H. D.	TP 92 (28)
Dickson, W. P.	Book (4)
Doro, M.	Book (12)
Dretzke, B. J.	WP 307 (27)
Dunstan, J. F.	TR 572 (43); TR 571 (43)
Eldridge, R. G., Jr.	TR 579 (31)
Frohreich, L. E.	Book (12)
Geske, T. G.	Book (12)

Hansen, R.	TP 96 (31)
Harvey, J. G.	Book (5)
Hassenpflug, A. M.	TR 574 (46)
Hiebert, J.	WP 304 (34)
Janicki, T. C.	TR 578 (45)
Jastrzembski, J. E.	Book (9)
Johnson, D. D.	TP 95 (25)
Johnson, H. W.	Book (12)
Kessler, J.	WP 306 (27); WP 305 (27)
Klausmeier, H. J.	Book (6); Book (6); Book (7); Book (8)
Kuiper, N. A.	WP 312 (29)
Levin, J. R.	Book (8); TP 93 (26); TP 91 (26); WP 306 (27); WP 307 (27); WP 305 (27); WP 314 (28); TP 92 (28); WP 312 (29)
Lipham, J. M.	Book (9); TR 571 (43)
Lucas, P. A.	Book (9)
Massaro, D. W.	Book (9)
Mathews, S. R. II	WP 308 (21); TR 569 (21)
McCormick, C. B.	WP 307 (27); WP 305 (27); TR 582 (28)
Michener, S.	WP 312 (29)
Miller, G.E.	WP 308 (21); WP 306 (27); WP 305 (27)
Morrison, B. S.	TP 96 (31)
Moser, J. M.	Book (4); WP 310 (32); WP 311 (32); WP 313 (33); WP 304 (34)
Otto, W.	Book (13); TP 96 (31)

Peterson, P. L.	TR 581 (39); TR 575 (39)
Pittleman, S. D.	TP 95 (25)
Popkewitz, T. S.	Book (10); Book (11)
Pressley, M.	TP 91 (26); WP 305 (27); TP 92 (28); WP 312 (29)
Price, G. G.	TR 578 (45)
Rankin, R. E.	TR 571 (43); TR 576 (44)
Read, W. C.	WP 309 (19)
Rembold, K. L.	WP 308 (21)
Richgels, D.	TP 96 (31)
Romberg, T. A.	Book (4); Book (5); TR 580 (34); TR 578 (45)
Rossmiller, R. A.	Book (7); Book (12)
Saily, M.	Book (7)
Schreiber, P. A.	WP 309 (19)
Shade, B. J.	TP 94 (20)
Shriberg, L. K.	WP 314 (28)
Sipple, T. S.	Book (8)
Spinelli, F.	TR 584 (40)
Steinberg, R. M.	WP 310 (32); WP 311 (32); WP 313 (33)
Stevens, B.	TR 577 (22)
Swing, S. R.	TR 581 (39); TR 575 (39)
Tabachnick, B. R.	Book (10); Book (11)
Taylor, G. A.	Book (9)
Toms-Bronowski, S.	TP 95 (25)
Truman, D. L.	TR 573 (29)
Venezky, R. L.	Book (9)

Wehlage, G. G.	Book (11)
White, S. R.	Book (13); TP 96 (31)
Wilkinson, A. C.	Book (13)
Wilkinson, L. C.	Book (14); TR 584 (40)
Yussen, S. R.	Book (15); WP 308 (21)